

SYNOPSIS OF NEW WORLD COMMICARPUS (NYCTAGINACEAE)

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ABSTRACT

Two new species of *Commicarpus* from México (*C. coctoris* and *C. praetermissus*) are described. A key to the five New World species is presented.

RESUMEN

Se describen dos nuevas especies de *Commicarpus* (Nyctaginaceae) de México. Se ofrece una clave para las cinco especies del Nuevo Mundo.

Commicarpus Standley, predominantly an African genus of 25–30 species (Meikle, 1978), was segregated from *Boerhavia* L. by Standley (1909), along with *Anulocaulis* Standley (1909) and *Cyphomeris* Standley (1911).

Fosberg (1978) reduced Standley's genera to subgenera under *Boerhavia*, though the combinations were never formally made and therefore have no nomenclatural standing (ICBN Art. 33.2). In modern floristic treatments, opinion is divided as to whether the segregate genera (or at least *Commicarpus*) deserve recognition. *Commicarpus* is recognized by, e.g., Breedlove 1986; González Elizondo et al. 1991; Liogier 1985; Brako and Zarucchi 1993. However, Acevedo-Rodríguez (1996) reduces *Commicarpus* to *Boerhavia*, as does Bogle (1974); Kellogg (in Howard 1988) likewise treats *Boerhavia* in the broader sense, to include *Commicarpus*, but acknowledges that cladistically there is no reason to choose one placement over the other—"We therefore include them in the same genus for convenience." I choose to recognize *Commicarpus*, but I have chosen specific epithets for the two new species which will not form homonyms if they are someday transferred to *Boerhavia*.

Study of some general collections from southwestern México, one communicated by courtesy of Paul A. Fryxell, the other long overlooked in herbaria, has revealed two novelties.

***Commicarpus coctoris* N.A. Harriman, sp. nov. (Fig. 1). TYPE: MÉXICO.**

OAXACA: Municipio San Agustín Atenango, 14 km al SO de San Marcos Arteaga, carretera Huajuapán-Juxtaluaca; laderas con matorral tropical caducifolia con unos encinos, *Brabea*, *Otatea*, *Bursera*, etc., suelo calizo, somero, alt. 1770 m, hierba pegajosa con ramas principales hasta 50 cm de largo, extendidas sobre el suelo, cálices guindas;



FIG. 1. Holotype of *Commicarpus coctoris* N.A. Harriman.

en borde del matorral, escasa, 23 Nov 1989 (flowers and fruits), *Koch & Fryxell* 89220 (HOLOTYPE: TEX!; ISOTYPES: CHAPA, OSH! and others to be distributed from TEX and CHAPA).

Haec species ob pilos glandulosos et perianthia rubra 12–16 mm longa et lata inter omnes species americanas peculiaris est.

Perennial herb, stems pink, to 50 cm long, sprawling over the ground, viscid, densely beset with multicellular, spreading, gland-tipped hairs, these mostly less than 0.5 mm long but some to 1 mm long. Leaves opposite, entire, isophyllous, blades 30–55 mm \times 15–40 mm, ovate, basally cuneate to rounded, apically acute and cuspidate, without evident internal crystals, marginally glandular ciliate, adaxially glabrous, abaxially glandular hairy on the main veins only, on glandular-hairy petioles 8–12 mm long. Flowering branches hairy like the main stems, terminal and from the upper axils, with pedunculate, 4–6 flowered, simple umbels. Flowers on glandular-hairy pedicels 8–18 mm long, the portion near base of anthocarp without stipitate glands. Perianth funnellform, cherry red, 12–16 mm high and wide, glandular-hairy externally, glabrous internally; stamens 4, filaments glabrous, exserted; style glabrous, exserted well beyond the stamens, the stigma capitate. Fruits thickly clavate, glabrous, striate but not ribbed, 6–7 mm long, the pustular glands irregularly arrayed in the upper 1/2–2/3 of the fruit (anthocarp).

Flowering and fruiting.—November, so far as known.

Distribution and habitat.—Known solely from the type collection, in tropical deciduous forest. Possible paratype, the information communicated by Richard Spellenberg, the specimen not seen by me: México. Oaxaca. Laguna Encantada, \pm 3 km al N de Justlahuaca, colinas yesosas con vegetación arbustiva dispersa de *Agave*, *Dasyllirion*, Compositae, alt. 1600 m, *S. Zamudio & G. Ocampo* 10951, 22 Nov 1998 (IEB, NMC).

Etymology.—The epithet honors Stephen D. Koch (1940—), German for “cook,” “coctor” in Latin, one of the collectors of the type material and most valued friend of Botany and botanists in México.

***Commicarpus praetermissus* N.A. Harriman, sp. nov. (Fig. 2). TYPE: MÉXICO. MICHOACÁN:** Tizupan, Coalcomán, woods, 0.5 m high, flower red, alt. 50 m, 4 Sep 1941, *Hinton et al.* 15911 (HOLOTYPE: LL!; ISOTYPES: K, NY, US and elsewhere).

A speciebus aliis pilis eglandulosis flexis, fere uncinatis, et perianthiis rubris glabrisque recedit.

Perennial herb, the slender stems probably sprawling, to 0.5 m tall or long, thinly to densely eglandular hairy, the hairs hooked and appearing almost uncinuate, antrorsely inclined. Leaves opposite, isophyllous, blades 25–40 mm \times 15–25 mm, ovate, apically retuse or rounded or acute, basally cuneate to rounded, with evident internal crystals, indistinctly ciliate, with a few hairs on the veins abaxially, otherwise glabrous, on hairy



FIG. 2. Holotype of *Commicarpus praetermissus* N.A. Harriman.

petioles 2–4 mm long. Flowering branches from the upper axils and terminal, bearing numerous pedunculate umbels, the peduncles and pedicels glabrous. Perianth above the ovary red, funnelform, 9 mm high and 12 mm broad, glabrous; stamens 2, the anthers exerted on glabrous filaments; style exerted, stigma capitate; fruit (anthocarp) slenderly clavate, 7.5–9 mm long, striate, glabrous, the prominent glands in 3–5 well-defined horizontal bands.

Flowering and fruiting.—September, so far as known.

Distribution and habitat.—Known solely from the type collection; from the Pacific coast at 18°11' N, 103°2' W (Hinton & Rzedowski 1972).

Etymology.—The epithet refers to the fact that the specimens have lain overlooked and neglected in numerous herbaria for over half a century; C. V. Morton in preparing the labels remarked that it was a new species; Meikle (1978) likewise remarked that it was a new species, though the material he had at hand from K was insufficient for a proper description.

KEY TO THE NEW WORLD SPECIES OF *COMMICARPUS*

1. Perianth above the developing fruit white or greenish-yellow, at most pink-veined in the sinuses; stamens 2.
 2. Perianth white or greenish-yellow, 3–4 mm long and wide, externally glabrous or obscurely puberulent; widespread from Texas to se Arizona and Baja California, s to Guatemala; West Indies; Bahama Archipelago; Colombia and Venezuela to Peru *Commicarpus scandens* (L.) Standley
 2. Perianth white, pink-veined in the sinuses, 10–15 mm long and 7–8 mm wide, hirtellous externally; endemic to Baja California, México *Commicarpus brandegeei* Standley
1. Perianth above the developing fruit light purple to mauve to cherry red; stamens 2, 3, or 4.
 3. Stems and leaves glabrous; perianth lilac, pink, or purplish red, puberulent at tip in bud, otherwise glabrous; stamens 3; Bolivia, Peru, Ecuador, and Galápagos Islands *Commicarpus tuberosus* (Lamarck) Standley, to include *C. crassifolius* Heimerl
 3. Stems and leaves variously hairy; perianth red, stipitate glandular or glabrous
 4. Stems viscid glandular with spreading hairs; perianth abundantly and shortly stipitate glandular externally, to 16 mm high and broad; stamens 4; thus far known only from Oaxaca, México *Commicarpus coctoris* N.A. Harriman
 4. Stems with abundant short, non-glandular hairs, these hooked at the tip and antrorsely inclined; perianth glabrous externally, to 9 mm high and 11 mm broad; stamens 2; thus far known only from Michoacán, México *Commicarpus praetermissus* N.A. Harriman

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REFERENCES

- ACEVEDO-RODRÍGUEZ, P. 1996. Flora of St. John, U.S. Virgin Islands. Mem. New York Bot. Gard. 78:1-581.
- BOGLE, A. LINN. 1974. The genera of Nyctaginaceae in the southeastern United States. J. Arnold Arbor. 55:1-37.
- BRAKO, L. and J. ZARUCCHI. 1993. Catalogue of the flowering plants and gymnosperms of Peru; Catálogo de las angiospermas y gimnospermas del Perú. Monogr. Syst. Bot. Missouri Bot. Gard. 45:1-1286.
- BREEDLOVE, D. 1986. Listados Florísticos de México. IV. Flora de Chiapas. Instituto de Biología, UNAM, México.
- FOSBERG, F.R. 1978. Studies in the genus *Boerhavia* L. (Nyctaginaceae), 1-5. Smithsonian Contr. Bot. 39:1-20.
- GONZÁLEZ ELIZONDO, M., S. GONZÁLEZ ELIZONDO, and Y. HERRERA ARRIETA. 1991. Listados Florísticos de México. IX. Flora de Durango. Instituto de Biología, UNAM, México.
- HINTON, J. and J. RZEDOWSKI. 1972. George B. Hinton, collector of plants in southwestern Mexico. J. Arnold Arbor. 53:141-181.
- HOWARD, R. 1988. Flora of the Lesser Antilles 4:1-673.
- LIOGIER, H. 1985. Descriptive flora of Puerto Rico and adjacent islands. 1:1-352.
- MEIKLE, R.D. 1978. A key to *Commicarpus*. Notes Roy. Bot. Gard. Edinburgh 36:235-249.
- STANDLEY, P.C. 1909. The Allioniaceae of the United States with notes on Mexican species. Contr. U.S. Natl. Herb. 12:303-389.
- _____. 1911. The Allioniaceae of Mexico and Central America. Contr. U.S. Natl. Herb. 13:377-430.